

12.1/12.2 worksheet

1. When will $y = \sqrt{x}$ include negative values on the inside of the radicand?

2. Evaluate the function for $x = -4, -3, -2, -1, 0, 1$ Use a table of values to display your answers.

$$y = 2\sqrt{x + 3}$$

Evaluate the function for the given value of x. Round your answer to the nearest tenth.

3. $y = \frac{1}{2}\sqrt{x + 4}; 32$

4. $y = \sqrt{8 - x}; 10$

Simplify the radical expression.

5. $\sqrt{180}$

6. $\sqrt{162}$

7. $\sqrt{507}$

8. $4\sqrt{6} + 2\sqrt{6}$

9. $\sqrt{10} - 8\sqrt{10}$

10. $3\sqrt{8} + \sqrt{18}$

11. $\sqrt{125} - \frac{1}{2}\sqrt{80}$

12. $\sqrt{54} - \sqrt{6} + \sqrt{27}$

13. $\sqrt{32} \cdot 2\sqrt{6}$	14. $\sqrt{12} \cdot \sqrt{50}$
15. $\sqrt{6}(\sqrt{8} + \sqrt{3})$	16. $\sqrt{7}(\sqrt{14} - \sqrt{5})$
17. $(\sqrt{5} + 1)^2$	18. $(3 - 2\sqrt{2})^2$
19. $\frac{5}{\sqrt{2}}$	20. $\frac{10}{\sqrt{5}}$
21. $\frac{3}{2 + \sqrt{2}}$	22. $\frac{6}{\sqrt{5} - 7}$

23.

Medicine A doctor may need to know a person's body surface area to prescribe the correct amount of medicine. You can use the model below to find a person's body surface area A (in square meters) where h represents height (in inches) and w represents weight (in pounds).

Body surface area model: $A = \sqrt{\frac{h \cdot w}{3131}}$

Find the body surface area of a person who is 5 feet 6 inches tall and weighs 120 pounds. Round your answer to the nearest hundredth.

24.

$1 + \sqrt{8}$	$\sqrt{12}$
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